

CLAIMS

I claim:

Sub 1. A tie bracket for connecting opposing insulating panels of insulating concrete forms, comprising a first elongate plate, a second elongate plate spaced apart from said first elongate plate, and a web securing said first plate and said second plate in spaced apart relation, wherein said web forms a plurality of circumferentially closed openings arranged in at least two horizontal rows when said plates are oriented vertically, wherein each said horizontal row includes at least two adjacent said openings.

Sub 2. The tie bracket according to claim 1, wherein one said horizontal row of openings includes at least two openings oriented such that the length of each one of said two openings extends horizontally.

3. The tie bracket according to claim 1, wherein one said horizontal row of openings includes at least three openings including a first outer opening, a second outer opening, and a central opening located between said first outer opening and said second outer opening, wherein said first outer opening, said second outer opening, and said central

34 opening are oriented such that each one of their respective lengths extends horizontally.

4. The tie bracket according to claim 1, wherein said web includes a plurality of vertically spaced apart spanning members extending from said first plate to said second plate, including an uppermost spanning member and a lowermost spanning member wherein each said spanning member comprises intersecting straps selectively orthogonally oriented relative to one another.

5. The tie bracket according to claim 4, wherein said web includes at least one brace connecting at least two of said spanning members, wherein said brace comprises intersecting straps selectively orthogonally oriented relative to one another.

6. The tie bracket according to claim 1, further comprising an upwardly open receptacle having width and a height greater than the width.

Sub 34 7. The tie bracket according to claim 3, wherein said first outer opening and said second outer opening each has height greater than that of said central opening.

8. The tie bracket according to claim 3, wherein said first outer opening and said second outer opening each are bounded by a said strap oriented with its width parallel to at least one of said first plate and said second plate.

Sub 9. The tie bracket according to claim 4, further comprising at least one circumferentially closed opening located above said uppermost spanning member.

10. The tie bracket according to claim 4, wherein said lowermost spanning member has at least one circumferentially closed opening formed therein.

Sub 11. A tie bracket for connecting opposing insulating panels of insulating concrete forms, comprising a first elongate plate, a second elongate plate spaced apart from said first elongate plate, and a web securing said first plate and said second plate in spaced apart relation, wherein said web forms a plurality of circumferentially closed openings arranged in at least two horizontal rows when said plates are oriented vertically, wherein each said horizontal row includes at least two adjacent said openings, wherein one said horizontal row of openings includes at least two openings oriented such that the length of each one of said two openings

FIG. 3

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extends horizontally, one said horizontal row of openings includes at least three openings including a first outer opening, a second outer opening, and a central opening located between said first outer opening and said second outer opening, wherein said first outer opening and said second outer opening each has height greater than that of said central opening, and said first outer opening and said second outer opening each are bounded by a said strap oriented with its width parallel to at least one of said first plate and said second plate, wherein said first outer opening, said second outer opening, and said central opening are oriented such that each one of their respective lengths extends horizontally, and wherein said web includes

a plurality of vertically spaced apart spanning members extending from said first plate to said second plate, including an uppermost spanning member and a lowermost spanning member, wherein each said spanning member comprises intersecting straps selectively orthogonally oriented relative to one another, said web includes at least one brace connecting at least two of said spanning members, wherein said brace comprises intersecting straps selectively orthogonally oriented relative to one another,

an upwardly open receptacle having width and a height greater than the width,

BY { at least one circumferentially closed opening
located above said uppermost spanning member, and
at least one circumferentially closed opening formed
therein.

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Subst 12. A form having a first insulating panel formed from expanded foam, a second opposed insulating panel formed from expanded foam, and a tie bracket spanning and connecting said first insulating panel and said second insulating panel, wherein said tie bracket includes a web having a first end embedded within said first insulating panel and a second end embedded within said second insulating panel, wherein said web forms a plurality of circumferentially closed openings arranged in at least two horizontal rows when said plates are oriented vertically, wherein each said horizontal row includes at least two adjacent said openings.

Sub B47 13. The form according to claim 12, wherein one said horizontal row of openings includes at least two openings oriented such that the length of each one of said two openings extends horizontally.

14. The form according to claim 12, wherein one said horizontal row of openings includes at least three openings including a first outer opening, a second outer opening, and a central opening located between said first outer opening and said second outer open, wherein said first outer opening, said second outer opening, and said central opening are oriented

B4 such that each one of their respective lengths extends horizontally.

5040/ 15. The form according to claim 12, wherein said web includes a first plate located at said end, a second plate located at said second end, a plurality of vertically spaced apart spanning members extending from said first plate to said second plate, including an uppermost spanning member and a lowermost spanning member, wherein each said spanning member comprises intersecting straps selectively orthogonally oriented relative to one another.

16. The form according to claim 15, wherein said web includes at least one brace connecting at least two of said spanning members, wherein said brace comprises intersecting straps selectively orthogonally oriented relative to one another.

17. The tie bracket according to claim 12, further comprising an upwardly open receptacle having width and a height greater than the width.

cont.

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19. The tie bracket according to claim 12, wherein said first insulating panel and said second insulating panel each have an upper surface, a plurality of projections formed in said upper surface, a lower surface, and a plurality of notches formed in said lower surface, wherein each said notch is dimensioned and configured to receive a said projection therein in close cooperation therewith, and each said notch is directly below one said projection.

20. The tie bracket according to claim 19, wherein all said notches of one said insulating panel are regularly spaced apart from adjacent said notches of said insulating panel by equal distance intervals,

said notches include a first end notch adjacent to only one other said notch and a second end notch adjacent to only one other said notch,

said insulating panel has a first end and a second end, and

said first end notch is spaced apart from said first end by a distance interval of half the magnitude of the magnitude of said distance intervals between adjacent said notches.

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